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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,587	04/23/2001	Shuxian Lou	CISCO-3794	5372

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EXAMINER

TANG, KENNETH

ART UNIT	PAPER NUMBER
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2127

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/841,587

Applicant(s)

LOU ET AL.

Examiner

Kenneth Tang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-25 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

- a. In claim 1:

- i. “reserving one of said plurality bundles” (line 3) is indefinite because it is not made explicitly clear in the claim language who or what is doing the reserving. For example, it is unclear if the subscriber is doing the reserving or if there is a manager or switch doing the reserving, or neither.
- ii. “changing an original source port number” (line 5) is indefinite because it is not made explicitly clear in the claim language who or what is doing the changing. For example, it is unclear if the subscriber is doing the changing or if there is a manager or switch doing the changing, or neither.
- iii. “modifying a subscriber address” (line 6) is indefinite because it is not made explicitly clear in the claim language who or what is doing the modifying. For example, it is unclear if the subscriber is doing the modifying or if there is a manager or switch doing the modifying, or neither.

- iv. “issuing a request to a remote management device” (line 10) is indefinite because it is not made explicitly clear in the claim language who or what is doing the issuing. For example, it is unclear if the subscriber is doing the issuing or if there is a manager or switch doing the issuing, or neither.
- v. “mapping said subscriber to said reserved port bundle in a port bundle object” (line 14) is indefinite because it is not made explicitly clear in the claim language who or what is doing the mapping. For example, it is unclear if the subscriber is doing the mapping or if there is a manager or switch doing the mapping, or neither. In addition, it does not make sense and is not understood how it is possible to map in a port bundle object. Furthermore, it is not made explicitly clear in the claim language whether the “object” is a physical object or a logical (software) one.
- vi. “assigning said reserved port bundle” is indefinite because it is not made explicitly clear in the claim language who or what is doing the assigning. For example, it is unclear if the subscriber is doing the assigning or if there is a manager or switch doing the assigning, or neither.
- vii. “original source port number” (line 5) is indefinite because it is not made explicitly clear in the claim language what this is or where this came from. In addition, the claim language has not established a relationship between this and the port bundle nor the subscriber.
- viii. “port bundle number” (line 5) is indefinite because it is not made explicitly clear in the claim language where this came from. For example, it is

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unclear whether or not the port bundle number came from a port bundle because no relationship between the two had been established.

b. Claims 16 and 25 are rejected for being indefinite by the same reasons as stated in the rejection of claim 1 above.

c. In claim 10, "at least one source port to receive" (line 2) is indefinite because it is not made explicitly clear in the claim language who or what is doing the sending. For example, it is unclear if the subscriber is doing the sending or if there is a manager or switch doing the sending, or neither.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9, 16-20, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kadambi et al. (hereinafter Kadambi) (US 2001/0043611 A1) in view of Wirstrom et al. (hereinafter Wirstrom) (US4,691,355).

4. As to claim 1, Kadambi teaches a method for associating a subscriber with one of a plurality of port bundles, comprising:

reserving one of said plurality of port bundles for said subscriber if said subscriber has not been assigned one of said plurality of port bundles (*page 9, [0117] and [0220], and see claim 3*);

changing an original source port number in a data packet to a port bundle number (*page 11, [0152], page 14, [0168], and page 17, [0204]*);

modifying a subscriber address in said data packet to an assigned aggregation address; issuing a request to a remote management device (*page 11, [0152], page 14, [0168], and page 17, [0204]*);

receiving a response from the management device (*page 7, [0102]-[0104]*);

mapping said subscriber to said reserved port bundle in a port bundle object (*page 14, [0169]*); and

assigning said reserved port bundle to said subscriber (*page 14, [0168], and see Abstract*).

Kadambi fails to explicitly teach using authentication for issuing a request, receiving a response of the authentication of the subscriber and the assignment of the port afterwards. However, Wirstrom teaches assigning ports after a signal is detected, received and responded to with respects to authentication (*col. 17, lines 56-68*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of using authentication for issuing a request, receiving a response of the authentication of the subscriber and the assignment of the port afterwards to the existing system and method of Kadambi in order to increase security (*col. 5, lines 18-24*).

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5. As to claim 2, Kadambi teaches wherein each of said plurality of port bundles includes a port bundle length, a port number, and an assigned aggregation address (*page 15, [0177]*).

6. As to claims 3 and 4, Kadambi in view of Wirstrom fails to explicitly teach wherein said range of sequential port numbers is approximated by range of sequential port numbers = $2^{\text{port bundle length}}$. However, a binary representation (log of base 2) to represent a range is well known in the art of computers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a range of a binary representation of a sequential port numbers because binary code is the language of the computer.

7. As to claim 5, Kadambi teaches wherein said port bundle length is an integer in a range of 1 to 16 (*page 14, [0168]*).

8. As to claim 6, Kadambi teaches maintaining a status for said subscriber (*page 14, [0169]*, *see Abstract*).

9. As to claim 7, Kadambi teaches signaling said status to said management device (*see Abstract*).

10. As to claim 8, Kadambi in view of Wirstrom fails to explicitly teach wherein said status indicates whether said subscriber is logged-on or logged-off. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the

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feature of having a status to indicate whether a subscriber is logged on or off because if it was logged off, the subscriber would no longer have to be dealt with.

11. As to claim 9, Kadambi teaches comprising changing said assigned aggregation address to said subscriber address, resetting said port number to said original source port number, and transmitting said data packet to said subscriber (*page 11, [0152], page 14, [0168], and page 17, [0204]*).

12. As to claim 16, it is rejected for the same reasons as stated in the rejection of claim 1.

13. As to claim 17, it is rejected for the same reasons as stated in the rejection of claim 2.

14. As to claim 18, it is rejected for the same reasons as stated in the rejection of claim 3.

15. As to claim 19, it is rejected for the same reasons as stated in the rejection of claim 4.

16. As to claim 20, it is rejected for the same reasons as stated in the rejection of claim 5.

17. As to claim 25, it is rejected for the same reasons as stated in the rejection of claim 1.

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18. **Claims 10-15 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kadambi et al. (hereinafter Kadambi) (US 2001/0043611 A1) in view of Brilliant et al. (hereinafter Brilliant) (US 3,558,823).**

19. As to claim 10, Kadambi teaches an apparatus for associating a subscriber with one of a plurality of port bundles, comprising:

at least one source port to receive at least one data packet, said data packet having a subscriber address (*page 4, [0043], page 7, [0100], page 11, [0151]*);

each of said plurality of port bundles coupled to said source port (*page 14, [0168]*);

a plurality of memories (*see Abstract*);

a port bundle object in each of said plurality of memories to associate said subscriber with said port bundle (*page 2, [0009]*);

a processor coupled to said plurality of port bundles (*page 14, [0169]*); and

an output port coupled to said processor (*page 3, [0039]*).

Kadambi fails to explicitly teach each of said plurality of memories coupled to one of said plurality of port bundles. However, Brilliant teaches having a plurality of port bundles (trunk groups) comprising a plurality of memories (*see claim 14*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of having a plurality of port bundles (trunk groups) comprising a plurality of memories so that each port bundle has its own memory.

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20. As to claim 11, Kadambi teaches wherein each of said plurality of port bundles includes a port bundle length, a port number, and an assigned aggregation address (*page 15, [0177]*).

21. As to claims 12 and 13, Kadambi in view of Wirstrom fails to explicitly teach wherein said range of sequential port numbers is approximated by range of sequential port numbers = $2^{\text{port bundle length}}$. However, a binary representation (log of base 2) to represent a range is well known in the art of computers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a range of a binary representation of a sequential port numbers because binary code is the language of the computer.

22. As to claim 14, Kadambi teaches wherein said port bundle length is an integer in a range of 1 to 16 (*page 14, [0168]*).

23. As to claim 15, Kadambi teaches signaling said status to said management device (*see Abstract*).

24. As to claim 21, Kadambi teaches maintaining a status for said subscriber (*page 14, [0169], see Abstract*).

25. As to claim 22, Kadambi teaches signaling said status to said management device (*see Abstract*).

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26. As to claim 23, Kadambi in view of Wirstrom fails to explicitly teach wherein said status indicates whether said subscriber is logged-on or logged-off. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of having a status to indicate whether a subscriber is logged on or off because if it was logged off, the subscriber would no longer have to be dealt with.

27. As to claim 24, Kadambi teaches comprising changing said assigned aggregation address to said subscriber address, resetting said port number to said original source port number, and transmitting said data packet to said subscriber (*page 11, [0152], page 14, [0168], and page 17, [0204]*).

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

d. **US 6,718,139 B1 (Finan et al.)** teaches protocol independent fiber cable communication to a subscriber.


29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (703) 305-5334. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt
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